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# Client Subsystem

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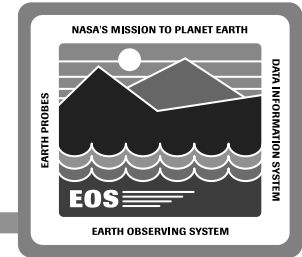
**[eugenie@killians.gsfc.nasa.gov](mailto:eugenie@killians.gsfc.nasa.gov)**

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**ECS Release A SDPS/CSMS Critical Design Review  
15 August 1995**

# Client Subsystem

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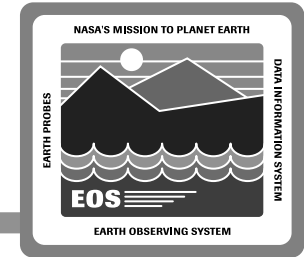


## Roadmap

- **Client Subsystem Overview**
- **Release A Subsystem Diagram**
- **Client Subsystem Context Diagram**
- **Client Subsystem Design Drivers**
- **Key Design Features and Benefits**
- **Trade Studies / Prototypes**
- **COTS**
- **Issues**

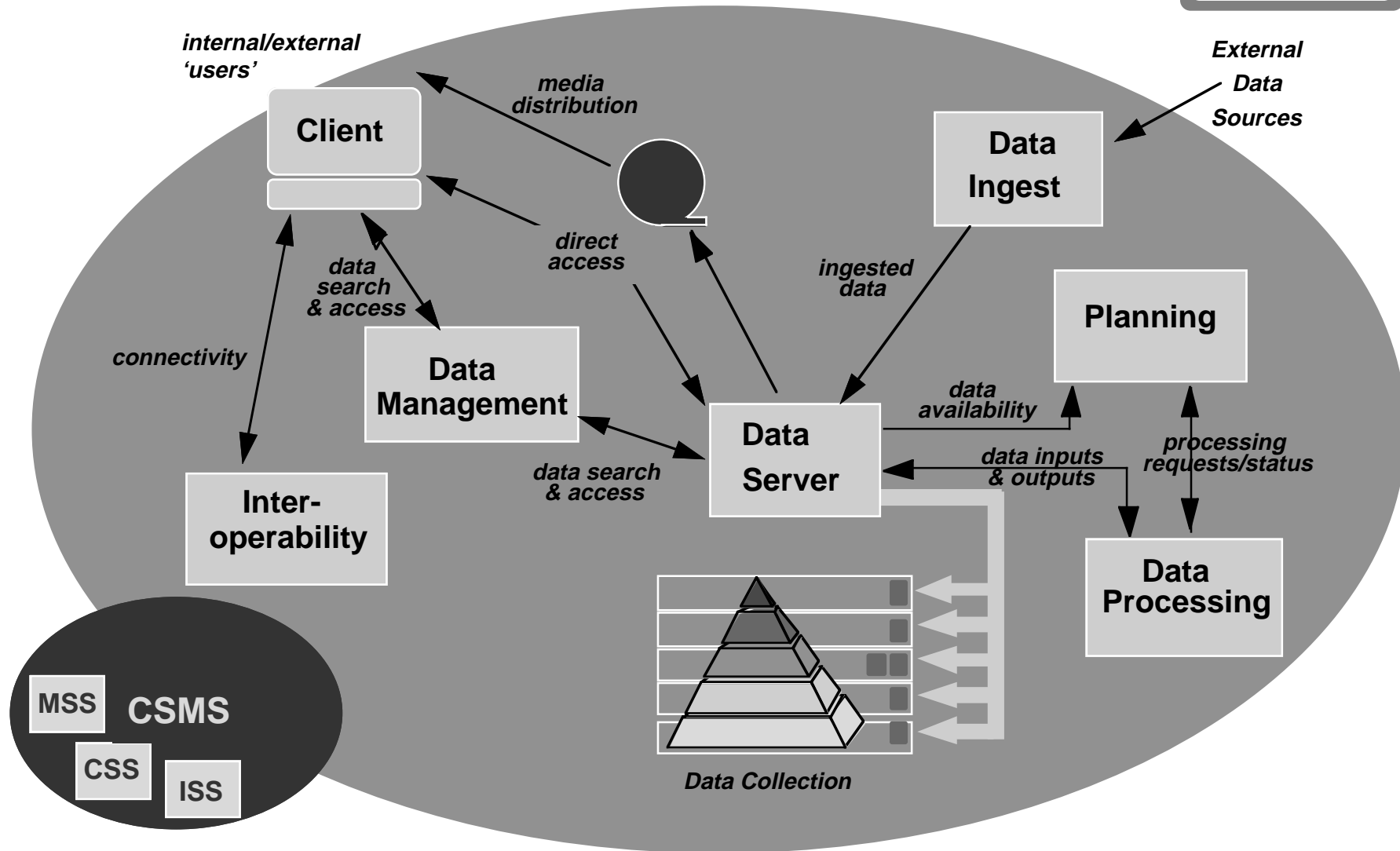
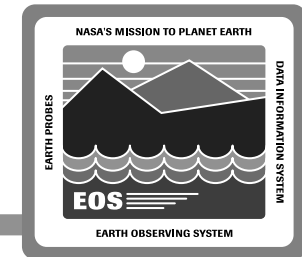
# Client Subsystem Overview

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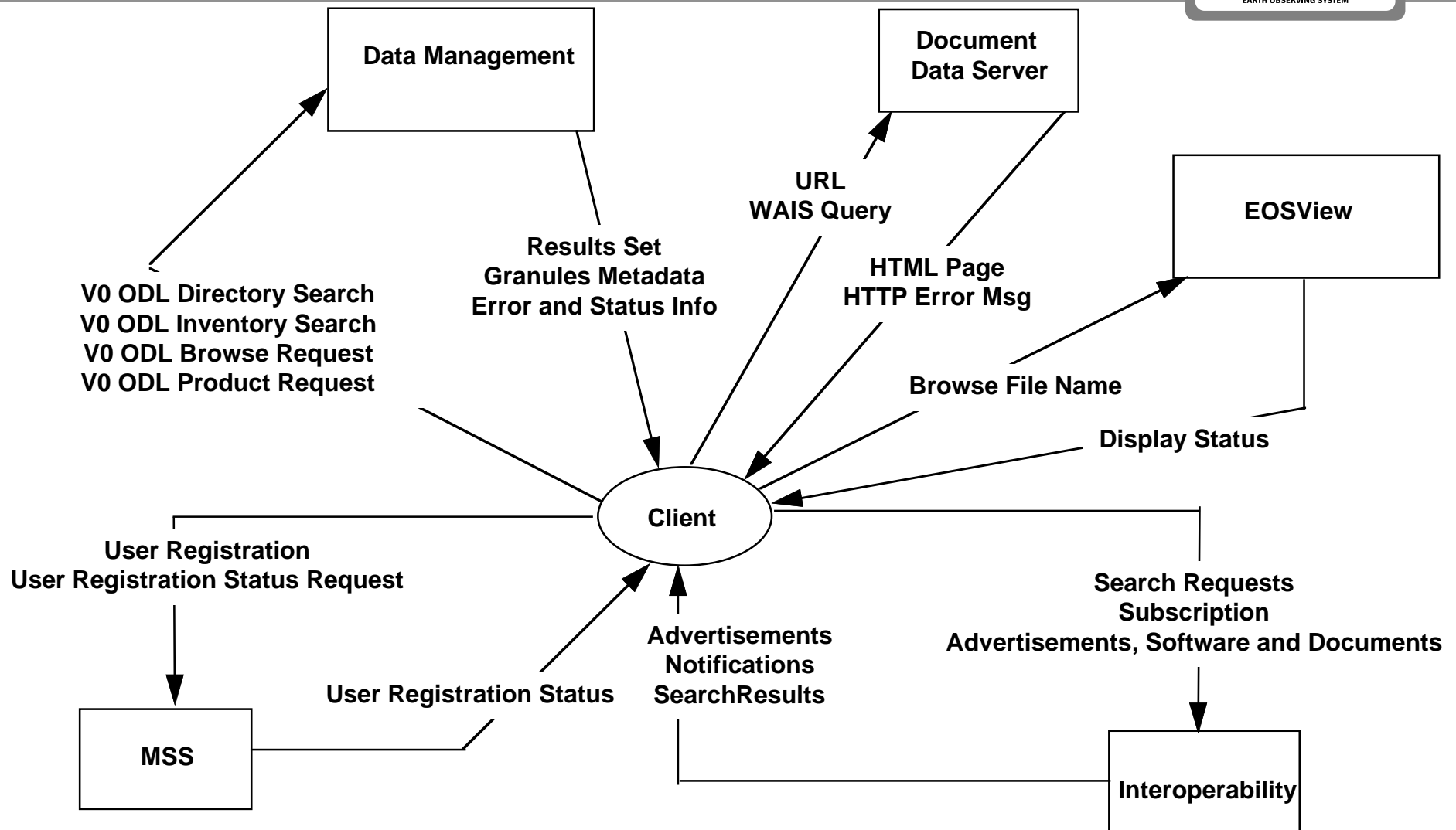
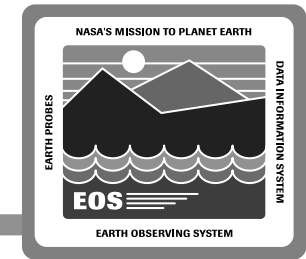


- **Window into the Release A system for all users.**
- **Provides a collection of components through which users access the services and data available in ECS and other systems interoperable with ECS.**
- **Provides services needed to link an application (e.g., a science algorithm) with ECS.**

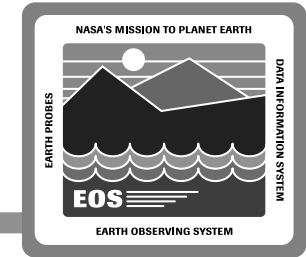
# Release A Subsystem Diagram



# Client Subsystem Context Diagram



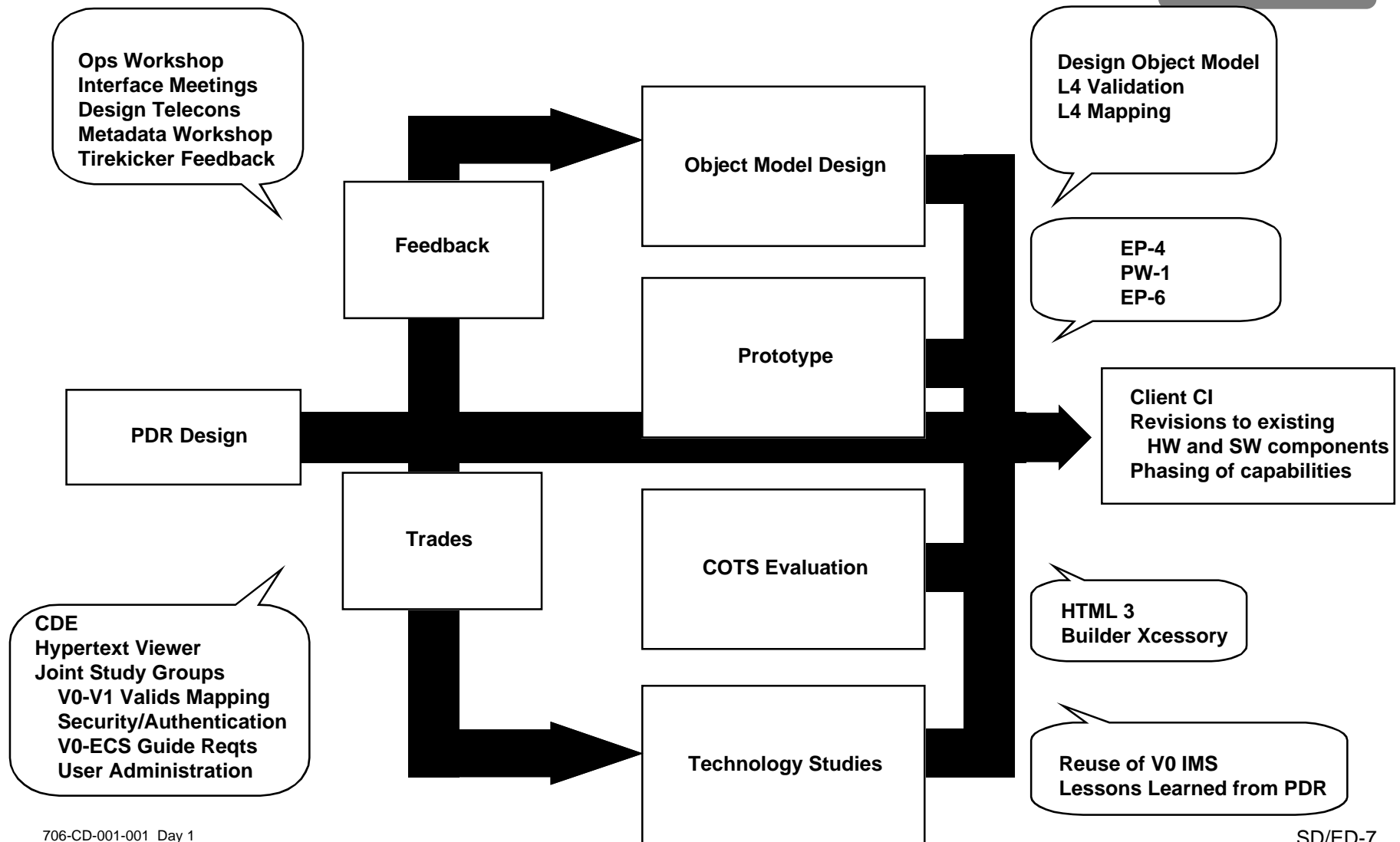
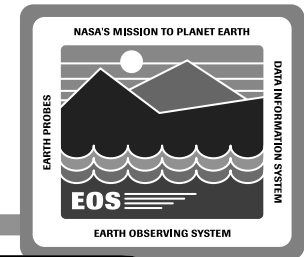
# Client Subsystem Design Drivers



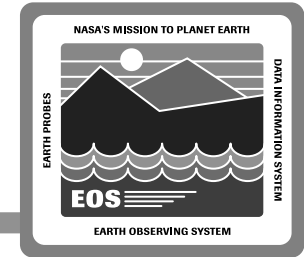
## Design Drivers

- Provide user interface into Release A ECS services
- Provide user interface into services interoperable with Release A
- Incremental Track
- Achieve goals in timely manner with reuse of V0 IMS
- GUI and ChUI
- WWW Browsing Tool
- Data Visualization Tool
- Multi-platform support
- Provide input mechanism for submitting data, software and documentation into the ECS
- ECS Style Guide

# Client Design Approach



# Key Design Features and Benefits



Desktop CSCI is the container

Workbench CSCI is the set of applications which provide access to services

Release A  
Search & Order  
Tool

Data  
Visualization  
(EOSView)  
CSC

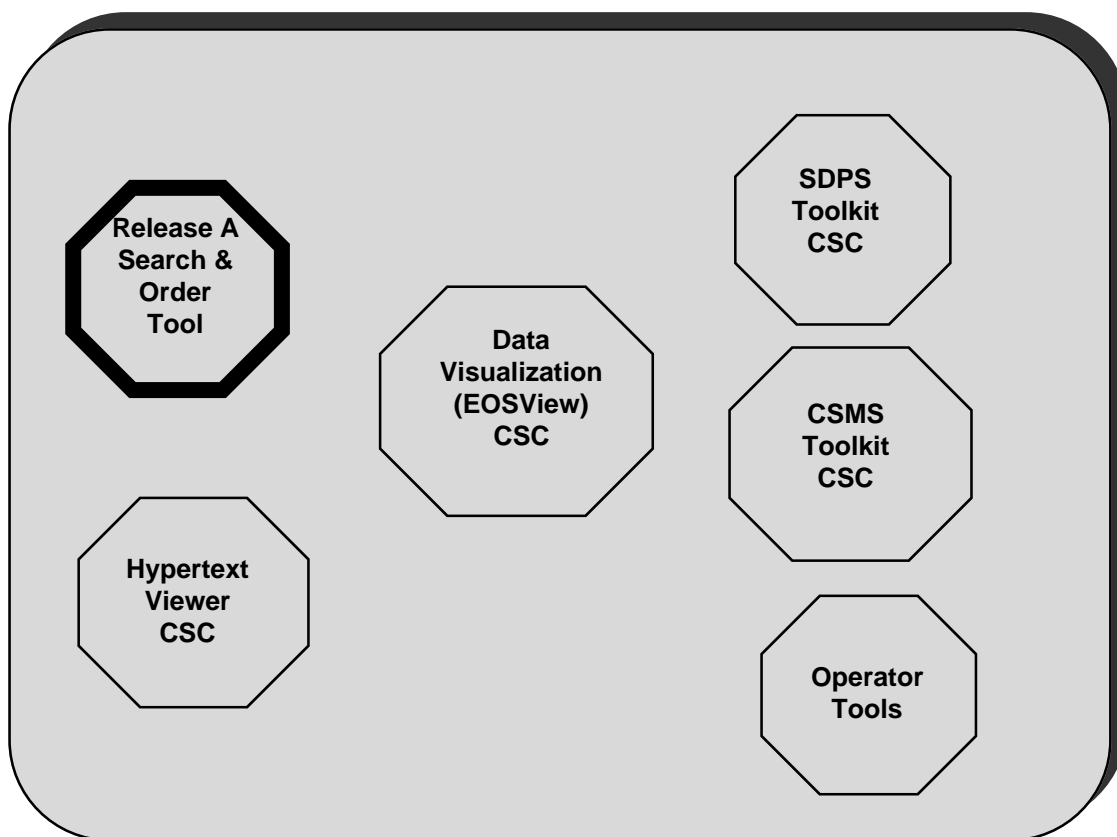
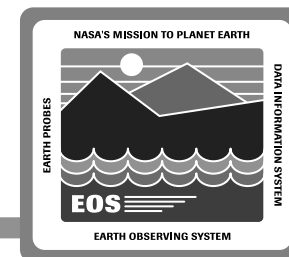
SDPS Toolkit  
CSC

CSMS Toolkit  
CSC

Hypertext Viewer  
CSC



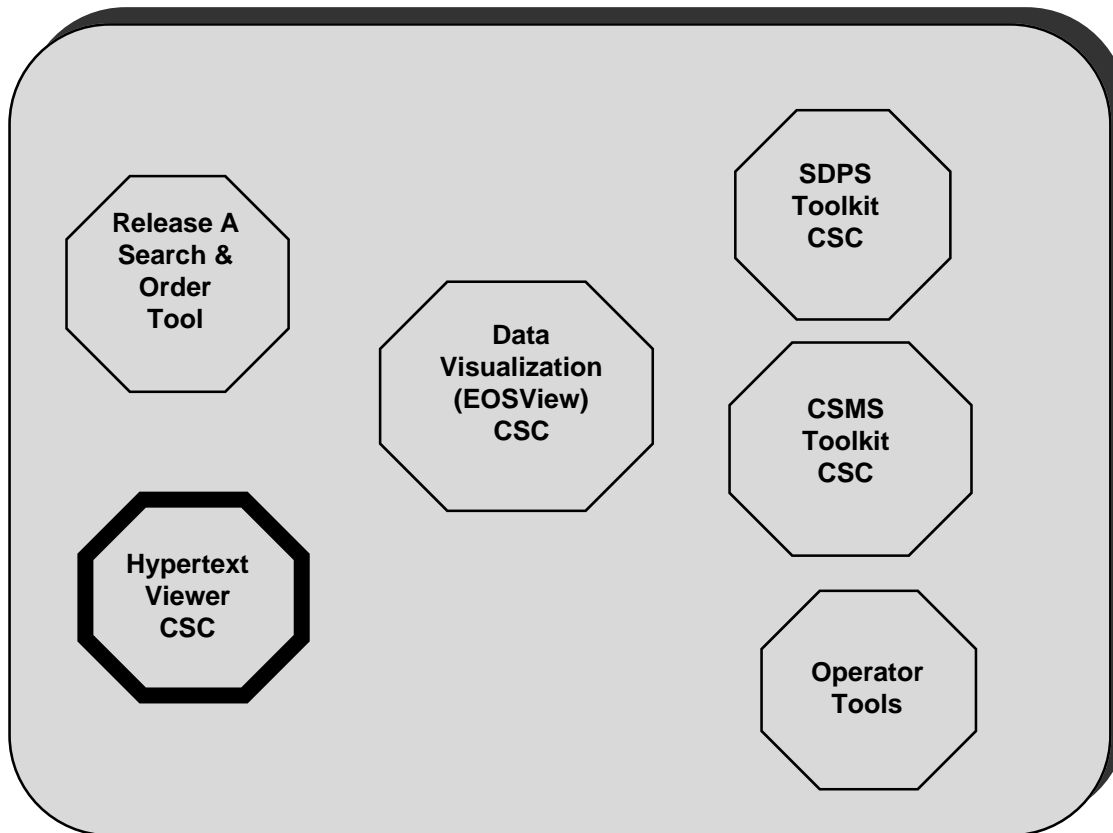
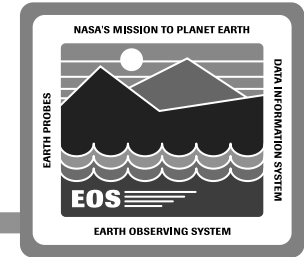
# Key Design Features and Benefits (cont.)



Release A Search & Order Tool (V0 IMS R6.0) provides the following services to users:

- Directory Information for Data Sets
- Inventory Search
- Guide Search
- Coverage Maps
- Browse
- Product Ordering
- VT100 Support with ChUI
- Interface with ECS user registration
- Default search criteria specification
- Display of retrieved browse granules in EOSView during data selection
- Ability to save retrieved browse granules

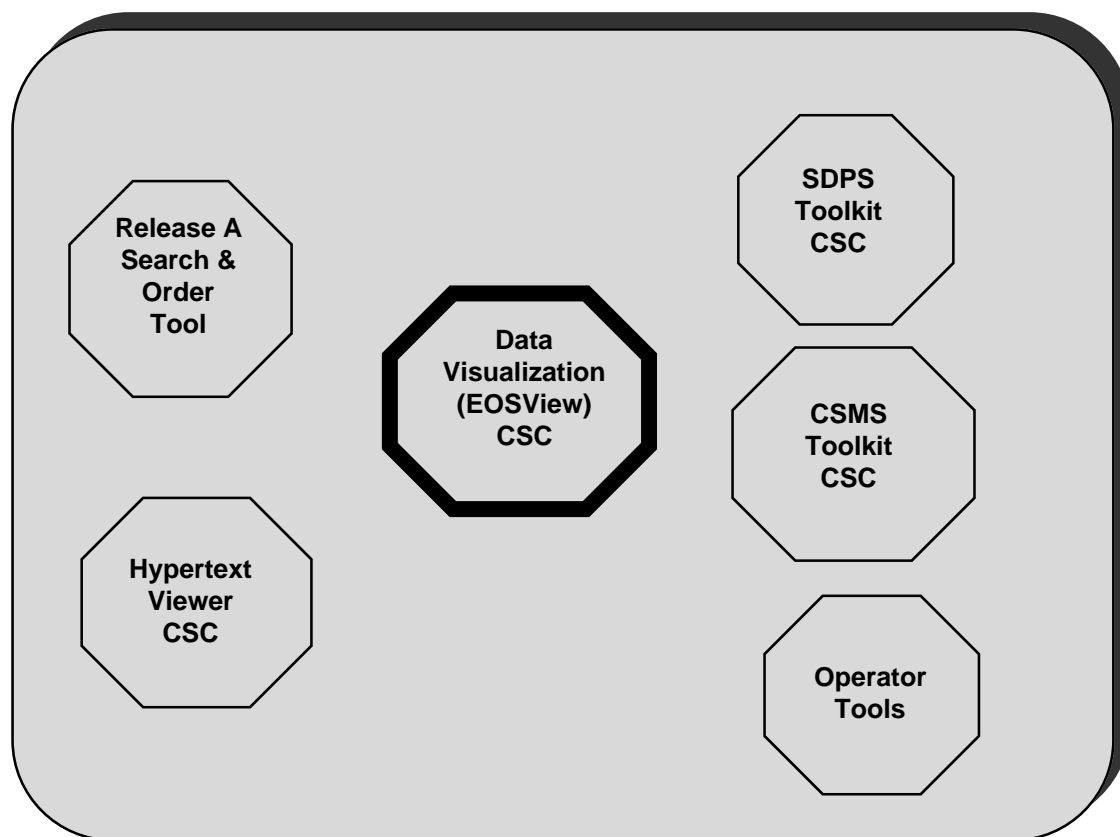
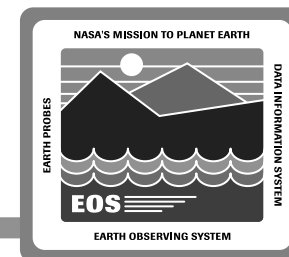
# Key Design Features and Benefits (cont.)



**Hypertext Viewer CSC provides users with access to the following services and utilities:**

- Advertising CSC
- VO IMS Web Client
- User Comments Interface
- User Profile Interface
- User Registration Interface
- Document Data Server

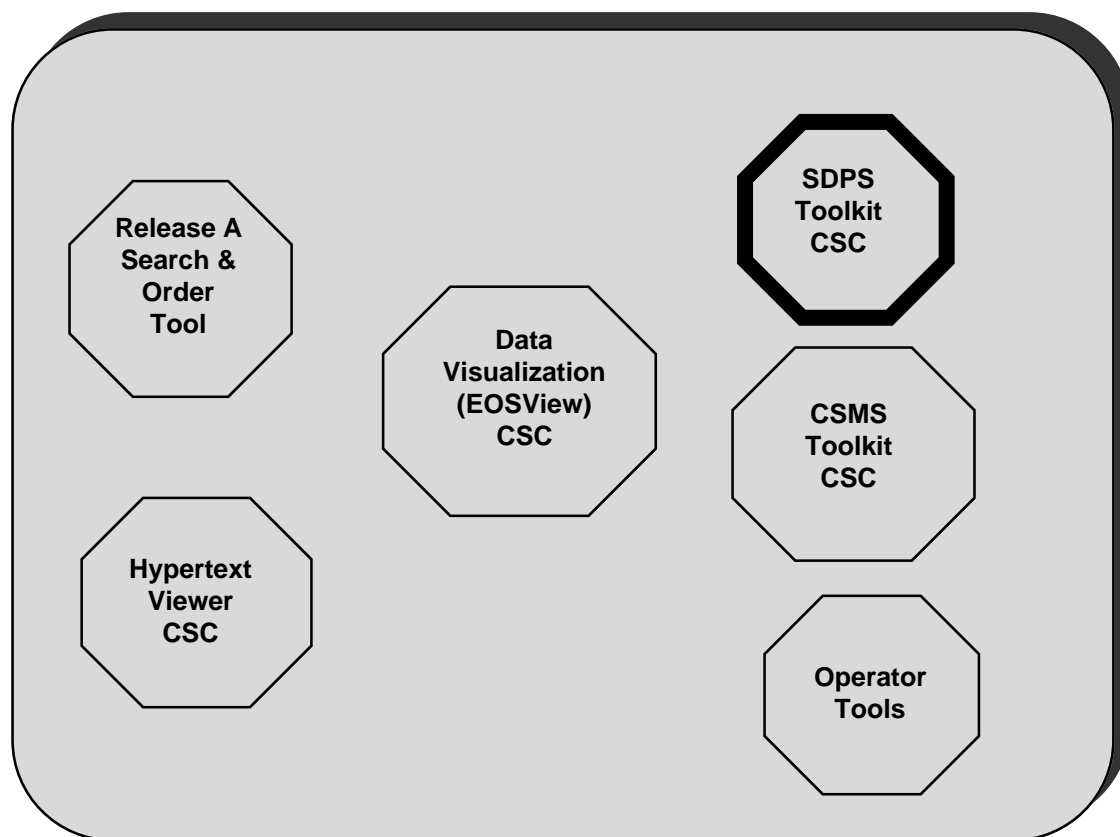
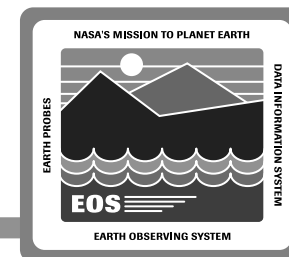
# Key Design Features and Benefits (cont.)



**Data Visualization (EOSView) CSC provides the following services to users:**

- **Visualization of browse images during the selection of data**
- **Verification of received data on all major platforms**
- **Display of all HDF-EOS browse formats**
- **Features include:**
  - **Display of raster images**
  - **Image animation**
  - **Display of metadata, annotations, and attributes as text**
  - **On-line help**

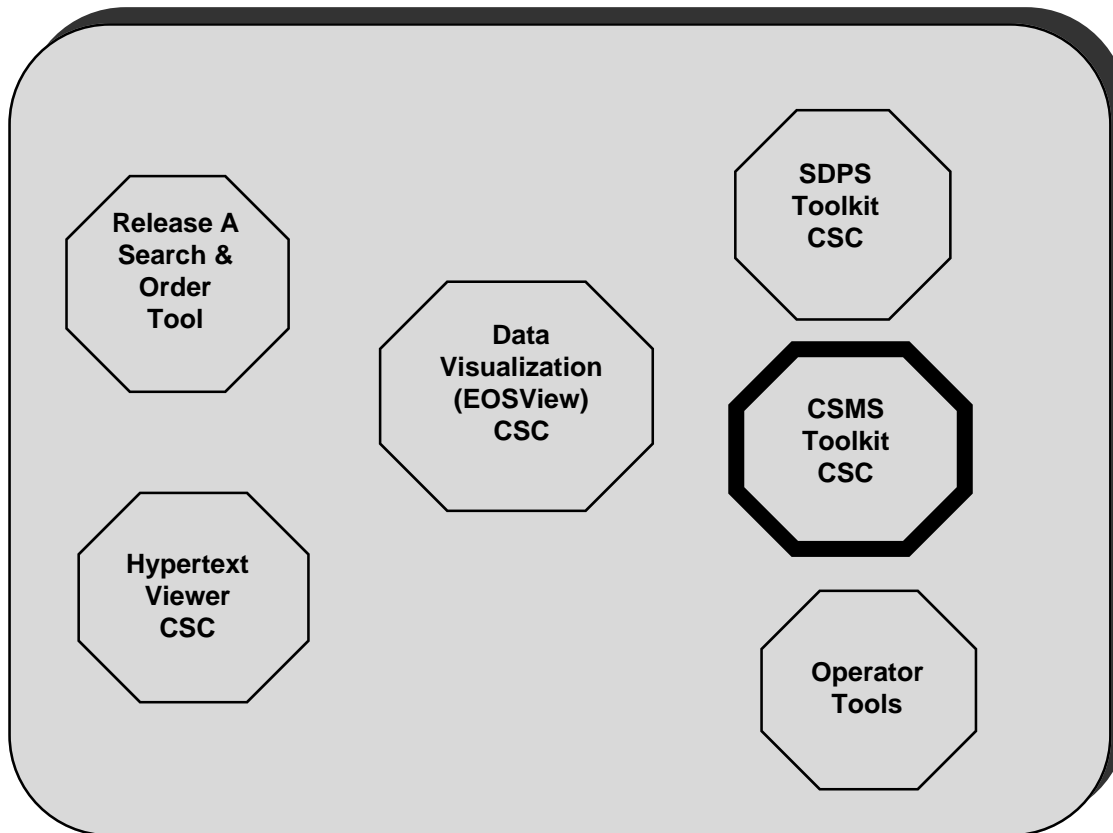
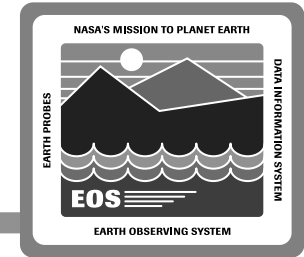
# Key Design Features and Benefits (cont.)



**SDPS Toolkit CSC provides the following services to users:**

- Tools to develop EOS data production software and to prepare that software for integration into DAACs
- Tools include:
  - Process control
  - Error and status msg handling
  - Ancillary data access
  - Metadata creation and access
  - Geo-coordinate transformations
  - Geolocation
  - Constants and unit conversion
  - Time transformation
  - Graphics and statistic libraries
  - Level 0 data access
  - Platform ephemeris and attitude data access
  - Celestial body position
  - General file I/O

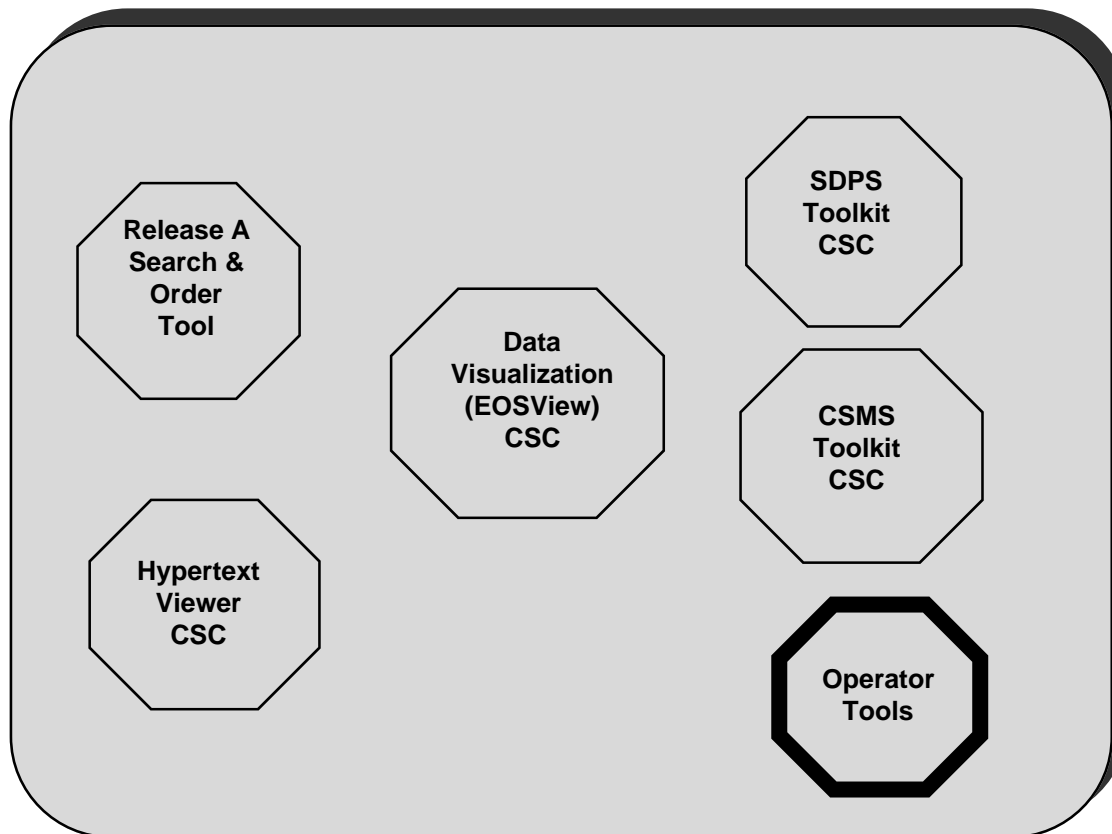
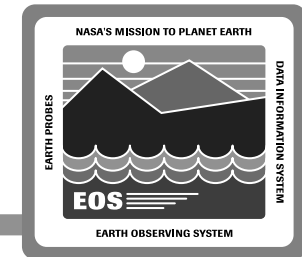
# Key Design Features and Benefits (cont.)



**CSMS Toolkit CSC provides the following services to users:**

- **Access to a subset of ECS services, including:**
  - **Software Locator**
  - **Trouble Ticketing Interface**
  - **User Registration forms**
  - **Kerberized versions of telnet and FTP**

# Key Design Features and Benefits (cont.)



## Operator Tools:

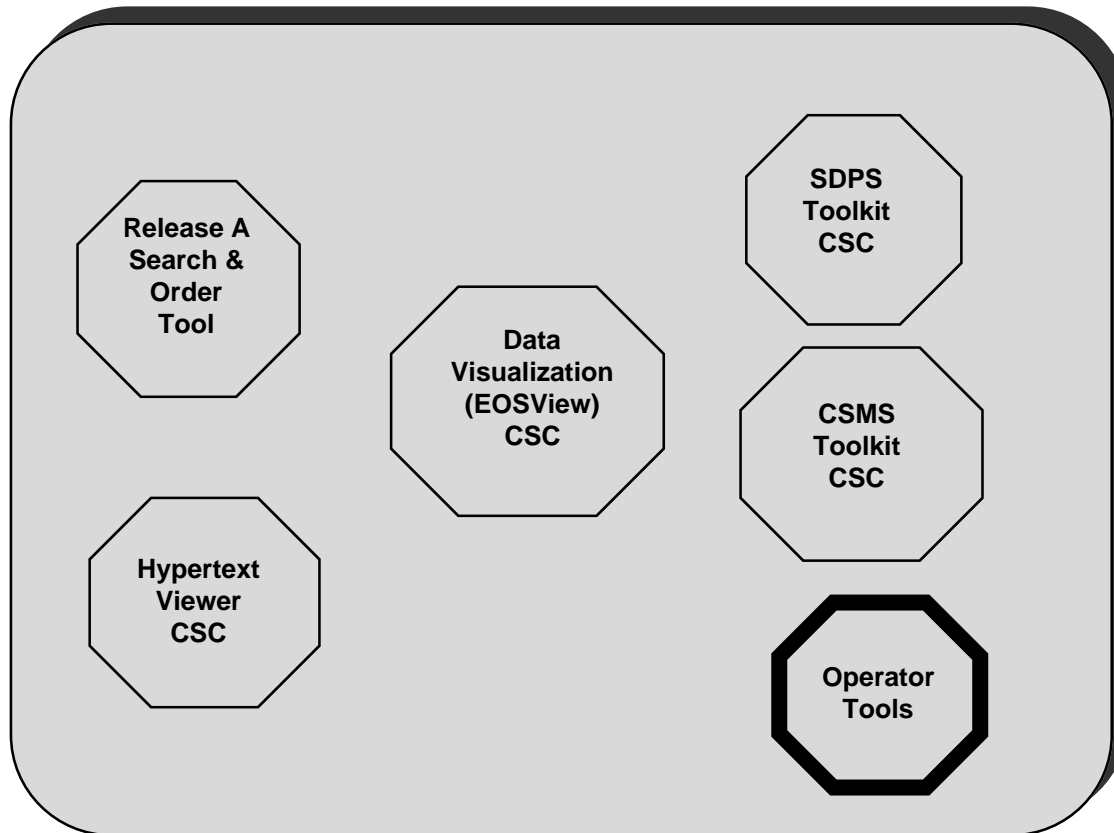
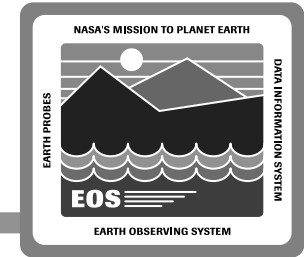
### • COTS

- HAL
- Remedy
- MountainView
- DDTS
- ClearCase
- Autosys
- Autoxpert
- Sybase
- AMASS
- AML
- Network
- General Sniffer
- TBD\*

Security Mgmt  
 Trouble Ticketing  
 Physical Conf Mgmt  
 Change Rqst Mgr  
 S/W Conf Mgmt  
 Data Process Sch  
 Data Process Sch  
 DBMS  
 FSMS  
 Robotics  
 LAN Analyzer  
 Fault/Perf Mgmt

\*ECS selection within the week

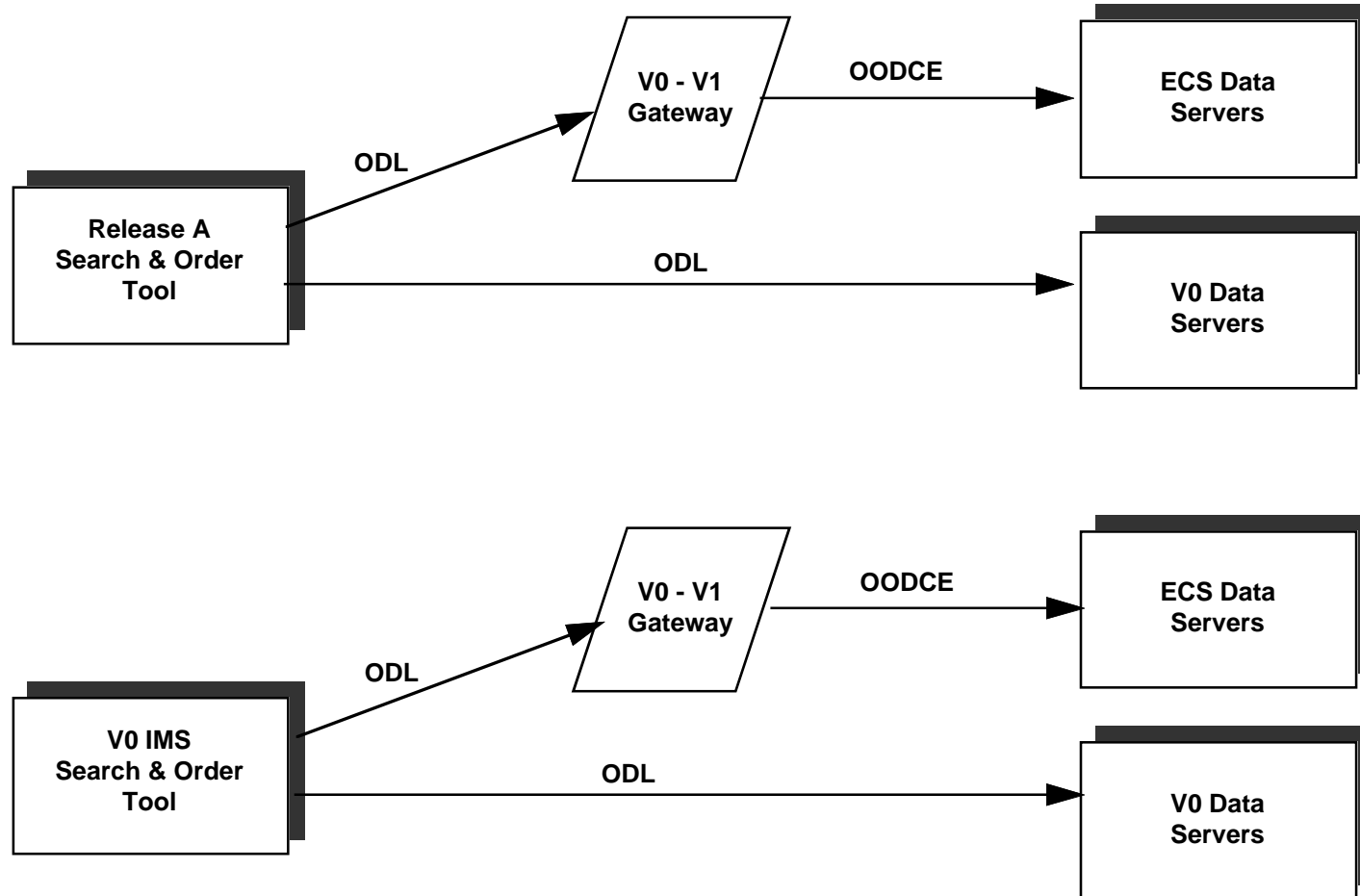
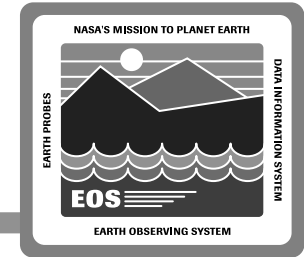
# Key Design Features and Benefits (cont.)



## Operator Tools:

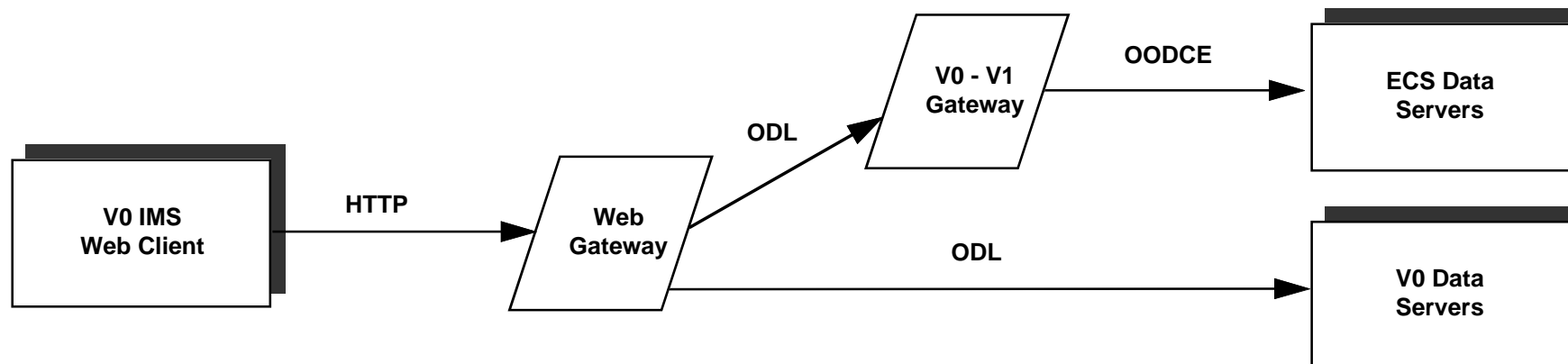
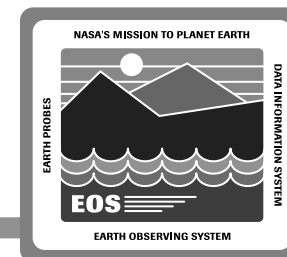
- Custom
  - Data Server Admin
  - Ingest Client
  - Ingest Admin
  - PGE Profile
  - Production Request
  - Subscription Submittal
  - Planning Workbench
  - Production Planner
  - Production Resource Manager

# Key Design Features and Benefits (cont.)

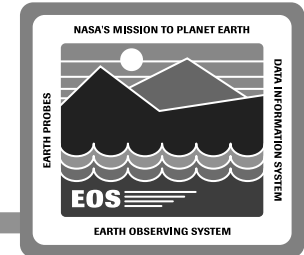




# Key Design Features and Benefits (cont.)



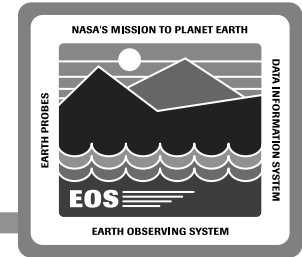
# Trade Studies and Prototypes



## Trade Studies

- **Hypertext Document Viewing Tool (Spring 1995)**
  - Available graphical Web browsers running on UNIX (30+)
  - Joint study with U of MD
  - Screening criteria included:
    - platform support (UNIX, Mac, MS-Windows)
    - popularity
    - robustness
  - Conclusion:
    - HTML 3 selected as standard
    - Netscape selected as browser of choice
  - Technology accelerating; results would include more browsers if study were repeated today
- **CDE (Pre-PDR 1995)**
  - CDE not available for all platforms during Release A timeframe
  - ECS Desktop fully CDE compliant
  - CDE selected as standard

# Trade Studies and Prototypes (contd.)



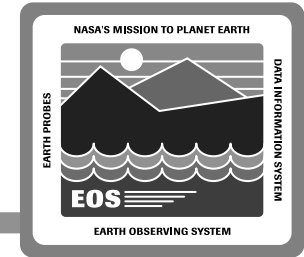
## Prototypes

### Desktop Prototyping Status

- EP-4 Initial Desktop Manager Prototype (Jan 95)
- PW-1 Prototype (May 95)
  - Feedback from EP-4 incorporated
  - Hierarchical Display of Desktop Manager
- EP-6 Status
  - Feedback from PW-1 incorporated
  - Common Desktop Environment (CDE) compatibility
  - C++ implementation

# COTS

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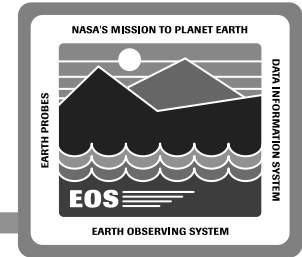
## COTS Selections

- HTML 3 selected as standard for hypertext viewer
- Builder Xcessory for GUI development

## OTS Selections

- Release A Search & Order Tool (V0 IMS 6.0)
- Hypertext Viewer (Mosaic)

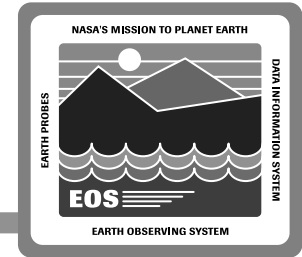
# Issues (cont.)



**Joint Study Groups are addressing the following issues:**

- **Mapping V0-ECS Validates Joint Study Group**
  - **Documenting process of mapping validates for initial set of Release A data so that process can be standardized to support continued data migration from V0**
- **Security/Authentication Joint Study Group**
  - **Decision has been made to support weak authentication using the existing V0 IMS user name and password mechanism, which may require some functionality restrictions**
  - **Requires minimal modifications to the V0 IMS Client**

# Issues



- **V0 - ECS Guide Requirements Joint Study Group**
  - **Gathered DAAC inputs on current V0 concept of operations and suggested requirements for COTS products at V0 Metadata and Guide Content Workshop in June 1995**
  - **Preparing RFP for project-wide WWW COTS (server, indexer, document repository)**
  - **Survey of authoring tools planned**
- **User Administration Joint Study Group**
  - **User Profile**
  - **Change Password**
  - **User Registration**